

REMARKS

This paper is filed in response to the office action mailed on February 28, 2003. In the office action, the restriction requirement is made final and independent claims 1 and 6 have been canceled without prejudice or disclaimer. Claims 2 and 7 have been amended to make them dependent from method claims 3 and 8, respectively. Thus, claims 2-5 and 7-10 are pending.

The office action objects to a typographical error in the specification on page 5. In the above amendments, this typographical error, in addition to other typographical errors are corrected. Support for the amendment to page 5 is provided by claim 4 and the paragraph bridging pages 6-7 of the specification as filed. Thus, no new matter is added thereby.

Finally, the office action rejects claims 3-5 and 8-10 under 35 U.S.C. § 103 as being unpatentable over the admitted prior art recited in the specification as filed, U.S. Patent No. 6,187,686 ("Shin") and Wolf et al., "Silicon Processing for the VLSI Era," Process Technology, Vol. 1 (1986) ("Wolf"). In response, independent claims 3 and 8 have been amended and applicant respectfully submits that all claims are allowable over any hypothetical combination of these three references for the following reasons.

At the outset, the admitted prior art does not teach or suggest the use of an etching prevention layer as recited in independent claims 3 and 8. The admitted prior art does not teach or suggest the deposition of an etching prevention layer on top of a nitride layer, the subsequent deposition of an anti-reflecting layer on the etching prevention layer, the subsequent deposition of a photoresist layer on the anti-reflection layer and the execution of a mask process on this structure.

In an attempt to supplement the admitted prior art, the Patent Office relies upon the Shin reference, which merely teaches the deposition of mask layer 12 of Shin in Fig. 2 which may be titanium or titanium nitride. However, the mask layer 12 is not subsequently buried underneath an anti-reflection layer as required by independent claims 3 and 8 and further buried beneath a photoresist layer on top of the anti-reflection layer as also required by independent claims 3 and 8.

Thus, Shin only teaches the use of titanium and titanium nitride as a mask layer 12. The Shin mask layer 12 does not function as an etching prevention layer as recited in independent claims 3 and 8 and therefore cannot support the obviousness rejection as recited in the office action.

Wolf is cited for the proposition that it teaches the use fluorine gas for etching a nitride layer and a tungsten layer. However, independent claims 3 and 8 recite the etching of the etching prevention layer with a chlorine gas. Dependent claims 2 and 7 recite that the etching prevention layer is titanium or titanium nitride. Nowhere in Wolf is it suggest that a titanium or titanium nitride layer be etched with a chlorine gas. Table 5 does not recite titanium or titanium nitride as one of the materials to be etched.

Further, Wolf does not teach or suggest the sequential etching using fluorine and then chlorine as recited in independent claims 3 and 8. Shin does not teach or suggest the sequential etching either.

Finally, while Shin teaches the etching of its mask layer 12 and platinum layer 10 with chlorine, Shin does not teach or suggest the etching of an etching prevention layer and polysilicon layer with chlorine as recited in independent claims 3 and 8.

Thus, independent claims 3 and 8 are allowable over the hypothetical combination of the three cited references because these references collectively fail to suggest the sequential etching with fluorine and chlorine as recited in independent claims 3 and 8.

In view of the above remarks, applicants respectfully submit that claims 2-5 and 7-10 are allowable and an early action so indicating is respectfully requested.

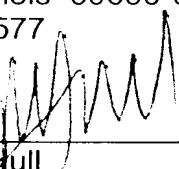
The Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 13-2855.

Respectfully submitted,

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By:



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